

MIDALLOY ER80S-Ni 1 WELDING WIRE

CLASSIFICATION

- AWS A5.28 Class ER80S-Ni1 / ASME SFA 5.28 Class ER80S-Ni1

DESCRIPTION

- MIDALLOY ER80S-Ni1 is a non copper-coated wire, used for GMAW and GTAW welding.
- ASME Boiler and Pressure Vessel Code Section IX F No. 6 and A No. 10.

APPLICATIONS

- MIDALLOY ER80S-Ni1 welding wire is used for GTAW root passes and for GTAW & GMAW joining of carbon manganese high strength steels that require good toughness at temperatures below -50°F.
- Good corrosion properties when used to weld weathering steels like ASTM A588.
- Can be used in conjunction with special NACE applications.

TYPICAL CHEMISTRY

C	Mn	Si	P	S	Ni	Cr	Mo	V	Cu	AL	Zr + Ti	N
0.11	1.02	0.58	0.012	0.010	0.92	0.04	0.01	0.002	0.06	0.002	0.002	0.005

TYPICAL MECHANICAL PROPERTIES

WELDING PROCESS(CONDITION)	GMAW (AS WELDED)	GMAW (PWHT 1,150°F - 1 HR)	GTAW (AS WELDED)
TENSILE STRENGTH	87,000 PSI	84,000 PSI	87,000 PSI
YIELD STRENGTH	73,950 PSI	70,000 PSI	72,500 PSI
ELONGATION IN 2"	25%	27%	27%
CHARPY IMPACT@ -50°F	40 FT-LBS	35 FT-LBS	60 FT-LBS

RECOMMENDED WELDING PARAMETERS

PROCESS	DIA. OF WIRE	AMPERAGE	VOLTAGE	SHIELDING GAS
GTAW	1/16"	50-120	7-13	100% Ar
	3/32"	120-200	10-16	
	1/8"	150-220	12-18	
GMAW (MIG) SHORT ARC	.035"	90-160	14-20	100% CO ₂ OR 75% Ar 25% CO ₂
	.045"	120-200	16-20	
GMAW (MIG) SPRAY TRANSFER	.035"	180-230	25-28	98% Ar 2% O ₂ OR 75% Ar 25% CO ₂ OR 90% Ar 10% CO ₂
	.045"	250-350	25-30	
	1/16"	280-400	26-36	

STANDARD PACKAGING

- TIG: 10 Lb. Tube / 60 Lb. Carton
- MIG: 33 Lb. Spool

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